Title AC TESTING OF LEAKAGE CURRENT IN INTEGRATED CIRCUITS USING RC TIME CONSTANT

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IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method of testing an integrated circuit (IC), the method comprising:

driving a terminal on the IC to a state;

stopping the driving of the terminal;

floating the terminal for a predetermined time;

sampling a state of the terminal after the predetermined time; and

determining a state of the terminal after the predetermined time.

2. (Original) The method of claim 1 further comprising:

determining quality of the IC based on the state of the terminal after the predetermined time.

3. (Original) The method of claim 1, wherein driving includes applying a logic low to the terminal.

4. (Original) The method of claim 1, wherein driving includes applying a logic high to the terminal.

5. (Original) The method of claim 1, wherein determining includes measuring a voltage of the terminal after the predetermined time.

6. (Original) A method of testing comprising:

charging a pin on an integrated circuit (IC) until it reaches a known state;

stopping the charging of the pin;

floating the pin for a predetermined time;

sampling a state of the pin after the predetermined time; and

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determining a test result of the pin based on the state of the pin after the predetermined time, wherein the method is performed with Boundary Scan.

- 7. (Original) The method of claim 6, wherein charging includes driving the pin to a logic low.
- 8. (Original) The method of claim 6, wherein charging includes driving the pin to a logic high.
- 9. (Original) The method of claim 6, wherein sampling includes determining if the pin changes state after the predetermined time.

Claims 10-30 (Canceled)

31. (Withdrawn) A system comprising:

an integrated circuit (IC) including a plurality of terminals; and a tester connected to the IC to drive a selected terminal among the plurality of terminals to a state at a first time and to determine a state of the selected terminal at a second time different from the first time.

- 32. (Withdrawn) The system of claim 31, wherein the tester is configured to apply a supply voltage to the selected terminal at the first time.
- 33. (Withdrawn) The system of claim 32, wherein the tester is configured to measure a voltage of the selected terminal at the second time.
- 34. (Withdrawn) The system of claim 33, wherein the IC is a Boundary Scan compliant IC.
- 35. (Withdrawn) The system of claim 31, wherein the plurality of terminals include a plurality of Boundary Scan terminals, wherein the tester connects to the IC through the Boundary Scan terminals.

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36. (Withdrawn) The system of claim 31, wherein the tester is a computer.

37. (Withdrawn) A system comprising:

an integrated circuit (IC) including a plurality of pins; and

a tester connected to the IC to charge a selected pin among the plurality of pins to a known state at a first time and to sample a state of the selected pin at a second time different from the first time, wherein the tester is configured to determine a test result of the selected pin based on the state of the pin at

the second time.

38. (Withdrawn) The system of claim 37, wherein the tester is configured to apply a supply voltage to the selected pin at the first time.

39. (Withdrawn) The system of claim 38, wherein the tester is configured to measure a voltage of the selected pin at the second time.

40. (Withdrawn) The system of claim 39, wherein the IC is a Boundary Scan compliant IC.

41. (Withdrawn) The system of claim 37, wherein the plurality of pins include a plurality of Boundary Scan pins, wherein the tester connects to the IC through the Boundary Scan pins.

42. (Withdrawn) The system of claim 37, wherein the tester is a computer.

43. (Currently Amended) A machine-readable medium having instructions stored thereon to cause a tester to perform a method, the method comprising:

driving a terminal on an integrated circuit (IC) to a state; stopping the driving of the terminal;

floating the terminal for a predetermined time;

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sampling a state of the terminal after the predetermined time; and determining a state of the terminal after the predetermined time.

- 44. (Previously Presented) The method of claim 43, wherein driving includes applying a logic low to the terminal.
- 45. (Previously Presented) The method of claim 43, wherein driving includes applying a logic high to the terminal.
- 46. (Previously Presented) The method of claim 43, wherein driving includes applying a voltage to the terminal.
- 47. (Previously Presented) The method of claim 43, wherein determining includes measuring a voltage at the terminal after the predetermined time.
- 48. (New) A machine-readable medium having instructions stored thereon to cause a tester to perform a method, the method comprising:

charging a pin on an integrated circuit until it reaches a known state;

stopping the charging of the pin;

floating the pin for a predetermined time;

sampling a state of the pin after the predetermined time; and

- determining a test result of the pin based on the state of the pin after the predetermined time, wherein the method is performed with Boundary Scan.
- 49. (New) The method of claim 48, wherein charging includes driving the pin to a logic low.
- 50. (New) The method of claim 48, wherein charging includes driving the pin to a logic high.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.116 – EXPEDITED PROCEDURE

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51. (New) The method of claim 48, wherein sampling includes determining if the pin changes state after the predetermined time.